

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

June 11, 2012

TO: Internal File

THRU: Ingrid Campbell, Lead *IC*

FROM: James Owen, Engineer *JO*

RE: Reopening of B Canyon Portal, West Ridge Resources, West Ridge Mine, C/007/0041, Task #4098

SUMMARY:

On February 22, 2012, the Utah Division of Oil Gas & Mining (DOGM) received an application for an amendment to the Mining & Reclamation Plan (MRP) of the West Ridge Mine. The application sought approval to allow the re-opening of the B Canyon portal. An initial review of the application resulted in the identification of the following engineering & bonding related deficiencies:

- **R645-301.513.500; R645-301.551** The applicant must include a commitment to backfill the portal opening to a minimum of 25 feet. The applicant must also include a cross section drawing that depicts the 25 feet of backfilled material as well as the location of the seal as it will be at the portal's reclaimed configuration.
- **R645-301-830.140.** The mine has adequate bond in place to allow for reclamation of the B Canyon portal. However, the applicant must submit an updated bond calculation spreadsheet for the portal and an updated bond calculation summary sheet to amend the bonding section of the MRP. Bonding details should be removed from the Engineering portion of the application and should be included in a Bonding section. The Division agrees to use \$4,604 as the unit cost for this particular portal reclamation.

On May 15, 2012, DOGM received an updated version of the application, including responses to the deficiencies. This memo addresses the application's compliance with the engineering (R645-301-500) and bonding (R645-301-800) sections of the Utah Coal Mining Rules. No additional deficiencies were identified.

TECHNICAL MEMO

TECHNICAL ANALYSIS:

RECLAMATION PLAN

MINE OPENINGS

Regulatory Reference: 30 CFR Sec. 817.13, 817.14, 817.15; R645-301-513, -301-529, -301-551, -301-631, -301-748, -301-765, -301-748.

Analysis:

The applicant states that before any construction starts an identification sign will be posted at the site. This sign will list the company name as permit holder, the permit number, address and phone number. Disturbed area perimeter markers and stream buffer zone signs will also be established around the construction site prior to any disturbance.

Up to 113 cubic yards of topsoil material will be removed and stockpiled adjacent to the portal. Another 50 cubic yards of earth material will be reworked to make a small equipment access ramp leading from the road up to the portal, a distance of about 50'-60'. After the portal is uncovered, the mining crews, working under strict oversight from the federal Mine Safety and Health Administration (MSHA) will remove the existing seal and begin to slowly and methodically work their way into the old works. In order to provide the necessary ventilation, a small portable face fan will be set up on the surface and vent tubing will be extended from the fan into the mine opening to provide fresh air. The crews will then advance into the mine, making sure the roof control is adequate as they proceed.

The applicant states that all facilities associated with the portal re-opening project will be temporary. The only equipment utilized will be a temporary ventilation fan and associated vent tubing, and a small electrical generator to provide power to the fan. This generator will also provide the power for the roof bolting machine. All equipment will be portable, and will be placed on crib blocks for support and leveling. There will be no concrete used. Equipment can be set along the existing roadway or turn-around area, with no excavation required.

The underground re-habilitation project is expected to require no more than six months to complete. During this time the only day-to-day activity at the B Canyon site will consist of several trips in and out of the portal for the work crew, and to deliver consumable supplies, such as roofbolts, timbers and concrete blocks needed for the re-habilitation work, and to deliver fuel for the generator. All of this deliver of men and materials can be accomplished using small mine-approved diesel pick-up trucks. There will be no storage of supplies or materials on the surface at the site. All materials will be hauled directly underground for storage.

After the underground re-hab work is complete, the seal will be re-constructed at the B Canyon portal. All portable equipment (fan, generator, vent tubing, etc.) will be removed. The steel canopy will be left in place. The portal opening will be backfilled, the access ramp will be removed, the topsoil material will be laid back, and the stockpiled vegetation mulch material will be spread over the reclaimed area. This will result in achieving approximate original (AML) contour. The surface will be roughened (gouged/pocked) to aid in water retention and to minimize soil loss to erosion. The area will then be re-seeded with the seed mix approved by the previous AML reclamation project.

Text in Chapter 5 of Appendix 5-19 reflects the applicant's commitment to backfill the portals to a minimum of 25 feet. Also, a cross section depicting the 25' of fill and the seal location has been added to Plate 2 of 2 within Attachment 9

A row of excelsior logs (sediment control structures) will then be placed around the down-slope toe of the disturbed area for additional erosion control. This row of excelsior logs will be in addition to the excelsior logs placed at the stream buffer prior to initial construction, which will also be left in place after reclamation until the Division has determined that re-vegetation has been established sufficient to provide adequate sediment control.

The applicant states that due to the small size of the project site, it is estimated that the reclamation work can be completed in 2-3 days. According to AML records, an identification monument was placed on top of the backfill during the 1998 reclamation. If the monument is still there, the company will save it, and replace it after the re-opening reclamation has been completed.

Findings:

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules.

BONDING AND INSURANCE REQUIREMENTS

Regulatory Reference: 30 CFR Sec. 800; R645-301-800, et seq.

Analysis:

The application included bonding calculations and estimates for reclamation of the site. The estimates include earthwork and revegetation. Since all equipment used will be mobile, and

TECHNICAL MEMO

since the existing steel portal canopy will remain in place (although backfilled and covered), there will be no demolition costs.

Total earthwork volumes are liberally estimated to be no more than 163 cubic yards, including 113 yards for topsoil removal/replacement and 50 yards for ramp construction and portal backfill. The total area to be re-vegetated is about 0.07 acres. Given the small size of the reclamation requirements for this project, the applicant determined that the most straightforward means of determining an adequate reclamation cost amount is to compare it to a similar approved amount for a somewhat comparable installation.

In November, 2008, the Division approved the Bear Canyon GVH site, which is small isolated disturbed area located nearby within the West Ridge Mine permit area. The total reclamation cost of the Bear Canyon GVH site associated with earthwork is \$2143, and for revegetation is \$2461, for a total of \$4604. This is for a 0.34 disturbed acre site, involving 842 cy of back fill, and 515 cy of topsoil replacement. In comparison the B Canyon portal disturbed area is 0.07 acres, involving 50 cubic yards of backfill, and 113 cubic yards of topsoil replacement. Again, there are no demolition costs associated with the B Canyon project. The Bear Canyon GVH site is obviously a much larger site to reclaim than the B Canyon portal site, with quantities generally about five times greater than for the B Canyon portal site.

DOGM and West Ridge have agreed to a \$4604 reclamation cost for the B Canyon portal job, as determined for the similar but more expansive Bear Canyon GVH installation.

The revised application included updated bond calculation spreadsheet information for the portal and an updated bond calculation summary sheet to amend the bonding section of the MRP. Bonding details were removed from the Engineering portion of the application and were included in a Bonding section. The Division agrees to use \$4,604 as the unit cost for this particular portal reclamation.

Findings:

Contents and information provided are sufficient enough to meet the minimum requirements of this section of the Utah Coal Mining Rules.

RECOMMENDATIONS:

Approval is recommended.